



THE RARA RAG

Newsletter of The Rochester Amateur Radio Association, Inc.

Founded in 1931

OCTOBER 2018
VOLUME 71, ISSUE 2

INSIDE THIS ISSUE

MONTHLY PROGRAM	1
BOARDZ BUZZ	2
CALENDAR OF EVENTS	2
EDUCATION	3
TECHNOLOGY GRANT	4
LINCON WEB	4
PUBLIC SERVICE	5
RAFFLE PRIZES	5
NOTES FROM THE WORKBENCH	6
XRFX FOX HUNT	7
FOX HUNTING	7
JOTA	10
ART AND DESIGN	10
RAGS OF THE PAST	11
VE TEAM	12
RARA CALENDAR	13
NEWS AREA FROM CLUBS	14
PARTS WANTED	16
AMATEUR'S CODE	16
RARA MARKETPLACE	17
RARA OFFICERS	18
AREA CLUB CONTACTS	19

INTRODUCTION TO SKYWARN®

SCOTT THEIS, W2LW, RARA VICE PRESIDENT

As we head into fall and the beginning of what some expect to be a nasty winter, it's time to explore what you can do to help collect weather information and exercise your ham radio skills. Join Mike Fries, Warning Coordination Meteorologist of the National Weather Service, and get an overview of:

- Watch/Warning/Advisory Products
- Preparedness Information
- Reporting Procedures

The United States is the most severe weather-prone country in the world. Each year, people in this country cope with an average of 10,000 thunderstorms, 5,000 floods, 1,200 tornadoes, and two landfalling hurricanes. Approximately 90% of all presidentially declared disasters are weather-related, causing around 500 deaths and nearly \$14 billion in damage each year.

SKYWARN® is a National Weather Service (NWS) program developed in the 1960s that consists of trained weather spotters who provide reports of severe and hazardous weather to help meteorologists make life-saving warning decisions. Spotters are concerned citizens, amateur radio operators, truck drivers, mariners, airplane pilots, emergency management personnel, and public safety officials who volunteer their time and energy to report on hazardous weather impacting their community.

Although the NWS has access to data from Doppler radar, satellite, and surface weather stations, technology cannot detect every instance of hazardous weather. Spotters help fill in the gaps by reporting hail, wind damage, flooding, heavy snow, tornadoes and waterspouts. Radar is an excellent tool, but it is just that: one tool among many that the NWS uses. The NWS needs spotters to report how storms and other hydrometeorological phenomena are impacting their area.

SKYWARN® spotter reports provide vital "ground truth" to the NWS. Spotter reports help NWS meteorologists issue timely, accurate, and detailed warnings by confirming hazardous weather detected by NWS radar. Spotters also provide critical verification information that helps improve future warning services. SKYWARN® Spotters serve their local communities by acting as a vital source of information when dangerous storms approach. Without spotters, the NWS would be less able to fulfill its mission of protecting life and property.

Come learn a few things about the weather that affects us every day and maybe help pass along critical information in the future that might save a life. Join us at our General Meeting on Wednesday October 3, 2018 at 7:00PM at the Boys' Scouts building at Seneca Waterways Council, 2320 Brighton Henrietta Town Line Rd, Rochester, NY 14623.



RARA



BOARDZ BUZZ

TIM GUYOT, KB1POP RARA PRESIDENT

Greetings from the desk of the new president of RARA. Forest has left some very large shoes to fill, and I appreciate the guidance he's already provided me. Before going any further, I want to thank those that have served with me on the board for the last two years. It's been very rewarding and it wouldn't have been the same without the contributions of everyone.

As mentioned in my candidacy bio, I have three main goals as the president:

1. To continue to improve on the great events and services we already deliver.
2. To drive membership by learning the interests of our license examinees and class takers.
3. To organize and promote operating opportunities and eventually open our own club station.

I'd like to take this time to dig into each of those a bit further. In these three areas, I have ideas of how to proceed, but am certainly open to input.

Continued Improvement:

As indicated in Gary's Meeting on the Future of RARA where he covered all the events and services we provide as a club, we have a lot going on. As Tim Brown indicated in his last Rag article, it takes a lot to make this all work. I want to be sure that we don't spread the board and our other volunteers too thin, so rather than start too many new programs, I want to focus on small improvements.

Here are some examples that we've implemented or are working on (I don't want to take credit, these are from other board members):

- Meetings - Board members greet and engage everyone coming in. We especially want to make visitors and potential new members feel welcome.
- Meetings - A pre-meeting slideshow with information about the club and upcoming events to make it easier for people to record dates and other key information.
- Winterfest and Picnic - Have a radio check-in that everyone participates in so that we all get some air time. It is a radio club after all.

Driving Membership:

We're trying to do a better job of engaging our license class students and license examinees. We don't want the test table to be our last contact with them, so we are asking them to fill out a survey of things that they are interested in, some of which may not be directly related to amateur radio, but where radio may be able to play a part. Once we get a baseline of this data, we will try to put together meeting presentations and RARA academy sessions that focus on the areas perspective members are interested in. Then we'll contact them and let them know about the upcoming programs specific to their interests.

Operating Opportunities:

Earlier I said that I don't want to start too many new programs, but there is clearly a demand for more operating events, so this will be the one "new program" we focus on. Unfortunately, HF operation at the BSA is difficult because of RF

noise in the direct vicinity of the building. This means that our operating events will need to take place elsewhere, which is not a problem because Monroe and the surrounding counties have tons of places we can go.

Some ideas we've had so far:

- Operate from various parks in the county. Either operating all together making contacts outside the group, or dispatching to separate parks and making contacts between locations.
- Pick a major contest and plan a club operation. (Much like we do for International Lighthouse and Lightship Weekend)
- Build QRP radios and go to a large park to test them out by contacting each other.

We're looking to put something together monthly or bi-monthly depending on other things going on the club like RARA academy. Much like our public service events, the board is happy to support and contribute, but we would like these events to be captained by someone not on the board.

The feedback we received during Gary's discussion on the future of RARA has renewed our desire to establish a physical club station. We will likely assemble a committee of board and non-board members to define the requirements and start the search. This will take a while, but we are taking this request from the membership very seriously.

Wrapping Up:

I look forward to another great year and am interested in any suggestions you have to make it even better. On that note, ideas are good, but stepping forward to help is even better.

CALENDAR OF EVENTS

WEDNESDAY OCTOBER 3, 2018- RARA General Meeting

7:00 PM at BSA Headquarters

2320 Brighton Henrietta Town Line Rd

Thursday October 4, 2018- RARA Board of Directors

5:45 PM at Novaworks, 333 Metro Park, F-500

WEDNESDAY NOVEMBER 7, 2018- RARA Auction

SATURDAY FEBRUARY 9, 2019—WINTERFEST

Stewart Lodge—Mendon Ponds Park

SATURDAY JUNE 1, 2019—ROCHESTER HAMFEST 2019

EDUCATION

Tim Brown, WB2PAY, Education Coordinator

2018 Fall License Classes

The Technician and General classes started on Tuesday September 18th but there is still time to join and learn. For late registration email education@rochesterham.org.

- Classes are FREE to RARA members and \$15 for nonmembers.
- ARRL License manuals are available for \$25.

There will not be an Extra class this fall. The next Extra class is planned for March 2019.



2018 Fall RARA Academy Workshops

Latest information is available at https://www.rochesterham.org/rara_academy.htm

Academy Workshops are held at the BSA Headquarters, 2320 Brighton Henrietta Town Line Rd, 10am to noon. You can sign up for Academy Workshops by emailing education@rochesterham.org. If you would like to assist or even create a session, please contact education.

► DMR, D-STAR and YAESU SYSTEM FUSION — Held on 9/8/2018

Mike Moore, KC2NM and Steve Verzulli, KA1CNF hosted a fascinating presentation on these popular digital voice modes. Features of each mode were explained and demonstrated. These modes can be used through a repeater system or via portable hotspots that receive the signal from your transceiver and place the digital data on the internet. I found the Yaesu System Fusion to be the most versatile. The AMS feature (Auto Mode System) automatically selects the digital or FM incoming signal. Thanks to Mike and Steve for sharing their knowledge and experiences on these modes.

Slides for the presentation are available on the RARA website. If you missed the presentation, a video has also been posted.



Hams serving Hams
We speak your language... QSL?

- * **FREE** home relocation and property search services
- * **FREE** valuation and financing consultations

- Estate Liquidation - Downsizing - or just a change of scenery...

*Whatever your real estate needs are, call:
Frank (WB2PYD) or Lisa (K2BGR)*

Lisa Schramm (K2BGR)
Licensed Real Estate Salesperson
LSchramm@KW.com
585.756.3185

Frank Schramm (WB2PYD)
Realtor
Licensed Real Estate Salesperson
Certified Financing Specialist
FSchramm@KW.com
585.512.8989

Keller Williams Realty Greater Rochester 2000 Winton Rd South Building 1-201 Rochester, NY 14618

**STONEWOOD
HOMES**
REAL ESTATE TEAM
AT
KW GREATER
ROCHESTER
KELLERWILLIAMS. REALTY
585.362.8564
www.Stonewood-Homes.com



► **Getting on the Air with HF — 10/20/2018**

The October 20th session will include:

- Overview and samples of Station Equipment and HF Antennas
- QSO Structure (calling dos and don'ts)
- Introduction to Nets - casual vs. directed nets
- Overview and use of Q codes
- QTH and Grid Squares
- Review of Band Plan and Considerate Operator's Guide
- **Hands on QSOs** - multiple radios will be set up for operations on **NYQP & JOTA**

In addition to the program above, we will participate in the [NY QSO Party](#) and [Jamboree on the Air](#) which are both active the weekend of October 20th. The program begins at 10am; however, we need help at 9am to set up antennas. To help with antennas, email education@rochesterham.org.

► **Power Supplies and Battery Technologies— 11/17/2018:**

The topics for the November 11th session will include:

- Switching and Linear Power supplies (characteristics & benefits)
- Battery Technologies: Lead Acid, Gel Cell, AGM and Lithium
- Characteristics and Uses for Various Technologies
- QRP Low Power Sources and Solar Power
- Power Pole Connectors and DC Distributions Systems
- Charging Systems: Battery Tender, Solar, Power Gate, Battery Boost
- HV Power Supplies and HV Test Equipment
- SAFETY in All Power Systems

► **VHF/UHF Operations— 12/1/2018:**

The topics for the December 1st session will include:

- Repeater Operations
- Internet Links like IRLP and Echolink
- Mobile, Portable, Handheld and Ham Shack Considerations
- Review of Digital Modes on VHF/UHF
- VHF/UHF SSB Operations
- Satellite Operations
- VHF/ UHF Antenna Options

* * * * *

Please take advantage of these RARA sponsored training and operating opportunities.

If you have a topic that you think will interest the membership, drop an email to education@rochesterham.org.

2018 TECHNOLOGY GRANT

Mike Moore, KC2NM

St. Louis School 5th Grade Virtual Reality Video on Catholic Courier Website

The Rochester Catholic Courier website has an article about using virtual reality in the classroom by the 5th grade students at St. Louis School.

The Lego Robotics program at St. Louis School was the recipient of the Rochester Amateur Radio Association Technology Grant this Spring. The Lego Robotics Program and the Virtual Reality Lab are two of the elements of the St. Louis School technology program which is taught by teacher Leonor Rivera. To view the video, and read the article, access the Catholic Courier website at the link which follows: <https://www.catholiccourier.com/videos/virtual-reality-at-st-louis-school>

On a related note, the RARA Board approved moving forward with the 2019 *Technology Grant*, the details of which are yet to be determined.



Click This

Lincon Web

CLUBS

- [Harrisburg Amateur Radio Club](#)
- [East Coast Amateur Radio Service](#)
- [South Coast Amateur Radio Service](#)
- [Midwest Amateur Radio Service](#)

SATELLITES

- [Magnetic Declination](#)
- [Visual Satellite Observer](#)
- [Jonathan's Space Report](#)

SDR

- [Digital Signal Processing](#)
- [dsp Guru](#)

OCTOBER PUBLIC SERVICE EVENTS

Mike Moore, KC2NM, Public Service Coordinator

Jamboree on the Air: Sat. October 20 **BSA Camp Babcock-Hovey - Ovid, NY**
from 8:00 AM till 4:00 PM



This annual event is held as part of the scouting Challenge Trophy Camporee at Camp Babcock-Hovey. The **JOTA** station is set up on an activity midway at the camp where the scouts and their families are exposed to ham radio and have the opportunity to talk via radio with other scouts as part of the JOTA Worldwide Event. The **RARA** involvement is mostly during the day on Saturday. You may register to participate at the Public Service Section of the **RARA** website and click on the sign-up link for JOTA or you may contact Steve Fell K2SRF at 585-233-7706 or K2SRF@ROCHESTER.RR.COM.

Pumpkin Patrol: October 30-31 Bridges of the New York State Thruway

This event contributes to the safety of travelers on the New York State Thruway. It is a statewide event and is held in cooperation with the New York State Troopers. Teams of two hams are assigned a post at each of the Thruway bridges in Monroe County. The teams observe activity on the bridges and report any suspicious activity to local law enforcement. These actions are repeated by ham clubs all along the thruway for statewide coverage. The event began several years ago when some untoward individuals were found to have dropped pumpkins from the bridges down onto passing trucks and cars. Our efforts have put a stop to the actions of these vandals but, more importantly, the resources of local law enforcement agencies have been put to more valuable use. The time commitment is from just after dark until just before midnight on Tuesday Oct. 30 and Wednesday Oct. 31. Operations will use the WR2AHL repeater 145.11. The following hams have registered to participate: AB2NG, K1EM, K1PY, K2DPC, K2UW, KA2WNS, KB2CHY, KC2KPG, KC2KPL, KC2NM, KD2EHW, KD2IOB, N2IZX, N2KZF, N2YPM, W2JAT, WA2CHV, WB2JOR, and WB2KAO. There are still some available slots to help out. Please consider signing up and participating in this event. Contact Ed Wilkonski K1EM, event captain of this event at wingstwofly@rochester.rr.com. You may also register at the Public Service Section of the **RARA** website and click on the sign-up link.



Past Events BikeMS : ROC the Ride Saturday August 25th, 2018

This successful event was held in great weather conditions. The **RARA** role was to conduct logistical and safety communications for the ride. The ride was a fundraiser where teams of bicycle riders collected sponsorships to benefit the Multiple Sclerosis Society. There were 3 major ride courses and smaller fun rides. Phil, K2ELV served as event captain and all of the hams reported that it was a fun event. Operations were conducted using the WR2AHL repeater 444.55 and WR2ROC repeater 444.25. The repeaters were linked together and offered outstanding coverage for all of the routes. Thanks to K1EM, K2ELV, KC2LVO, KC2NM, KD2DNO, N2BNE, and N2PEZ, for making this event the success that it was!

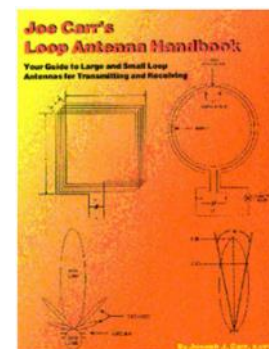


Results for the Fairport Lift Bridge Regatta scheduled on the Erie Canal – Fairport, NY Sunday September 30 will be reported in the November **RARA** Rag. Remaining events in the 2018 public service calendar are listed in the following table. Visit https://rochesterham.org/public_service.htm for more information and to volunteer.

Holiday Science & Technology Days	Rochester Museum & Science Center	Wednesday - Saturday	December 26-29
-----------------------------------	-----------------------------------	----------------------	----------------

OCTOBER MEETING RAFFLE PRIZES

- Baofeng UV5R7W
- Loop Antenna Handbook
- MFJ-1710 2M Telescopic Antenna w/BNC



NOTES FROM THE WORK BENCH: TRI-BAND PORTABLE VERTICAL ANTENNA

Karl Heinz Kremer, K5KHK

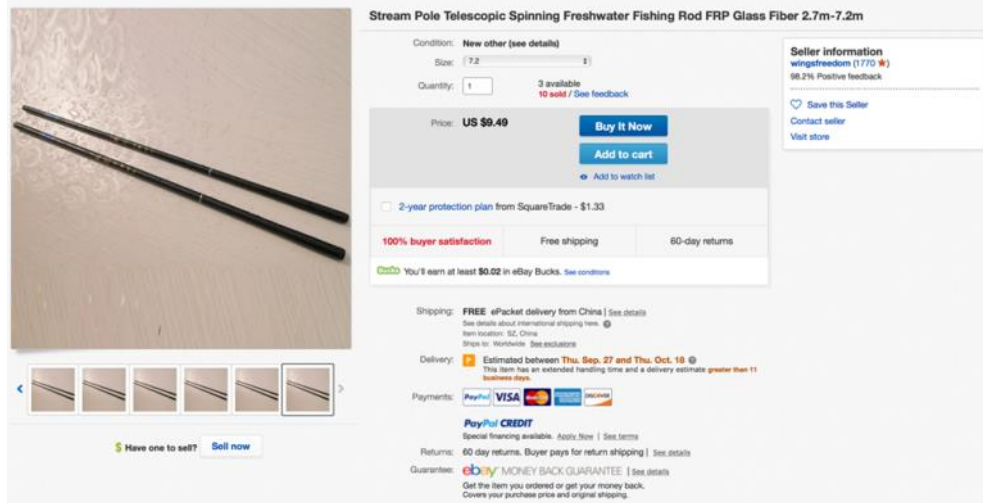
In last month's Rag I described my new 20m SSB transceiver. A radio without an antenna is just an expensive door stop, so let's add an antenna to the setup.

In addition to the 20m Slop Bucket, I also have a 40m BitX radio, so I need an antenna that is easy to transport, easy to set up and take down, and will cover both 20 and 40 meters. The "QRPGuys Portable Tri-Band Vertical Antenna" fits the bill. You can find out more about this antenna using this URL: <https://qrpguys.com/qrpguys-tri-band-portable-vertical-antenna>

The idea for this antenna goes back to an article that Joe Everhart (N2CX) wrote for the QRP Quarterly magazine, which you can find in the July 2017 issue on page 5 ("Revised Antenna Loading Coil Scheme"). If you don't have a QQ subscription, you can read about the details of the construction in the QRPGuys manual, which is linked to from their product page.

What it comes down to is that the vertical antenna element is a piece of wire that is cut for the 20m band, the other two bands use loading coils

In order to mount that wire vertically, we use a cheap (\$10) eBay crappie pole - yes, that's less than \$10 shipped from China.



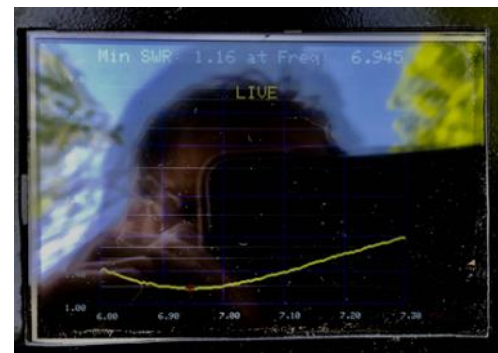
They are available from different vendors, just search for "Stream Pole Telescopic Spinning Freshwater Fishing Rod FRP Glass Fiber 2.7m-7.2m". Both the 6.3m or the 7.2m version will work. You might not always get what you order: I ordered two 7.2m poles, and ended up with one 6.3 and one 7.2m - and the difference in length of the two is definitely not 0.9m...

As mentioned, in order to cover 30 and 40 meters in addition to 20m, we need to add loading coils, and that's where the QRPGuys kit comes in: It provides a circuit board that can also be used to wind up the antenna wire, two toroids and wire for the loading coils and a couple of switches, plus some hardware to connect the antenna wire and the radials.

Here is a picture of the kit after unpacking it from its plastic bag.

When you wind the toroids, make sure to measure their inductance and verify that you are close to what's specified in the assembly manual.

Once assembled, don't cut the toroid wire until you've gone through the fine tuning. I had to take a few windings off the toroid for the 40m band. You can check how close you are using an antenna analyzer. Here is a (bad) picture during the process of fine tuning - the lowest SWR is still below the correct frequency range.



So, how do you then attach the antenna wire to the fishing pole? Blue painters tape is your friend. I tape the end of the wire to the end of the pole, and then add a supporting piece of tape on the next larger element of the fishing pole. In addition to the antenna wire, this antenna also needs four 10ft radials, which are connected to the bottom of the circuit board. I've added crimp connectors to my wires to make it easier to hook them up.

This picture was actually taken while I was still fine tuning the toroids - hence the pieces of wire that are sticking out. Once both toroids are done, they get attached to the board using cable ties.

This is a great QRP antenna for SOTA/POTA or any other activity where you want to have a lightweight antenna that can be put up in no time.

To make the antenna easier to stand on its own, I use a cheap Home Depot work light stand, and a



piece of 1" PVC pipe to connect the two. The QRPGuys assembly manual lists a number of different ways to mount the antenna.

Does it work? Yup. I used it for a few months as my main antenna at home, and made contacts on all three bands.

Unfortunately, QRPGuys is taking a fall break, and it will be a few weeks until they accept orders again. With the information in their assembly manual, you can certainly do a scratch build without any problems. You may even use larger toroids for more than QRP power.



ANNOUNCING THE XRX RADIO CLUB FALL FOXHUNT SATURDAY, OCT. 13, 2018

The XRX Radio Club's annual Fall Foxhunt (radio direction finding) is scheduled for Saturday, October 13th. The hunt will start from the Webster Recreation Center parking lot, 1350 Chiyoda Drive in Webster. Please check the club website (xarc.us/) for any last minute updates. Registration is 9:00AM with the hunt to begin at approximately 9:20AM. The planned contest run time is between 9:30 and 11:30 with lunch and awards at a local restaurant to follow.

The hunt is free (except for lunch) and open to all amateurs regardless of club affiliation or previous experience. Most of us hunt in teams of two or three. Many teams (including the winners of the last hunt) aren't formed until the day of the hunt. Novice hunters will be linked up with experienced hunters if they wish. If you're new to foxhunting, all you need to get started is a radio capable of receiving 2 meters. Fox hunting is challenging and fun. We hope you can join us.

For more information, please contact Bob Karz, K2OID (rkarz@rochester.rr.com)

FOX HUNTING: IT'S NOT JUST FOR STODGY ENGLISHMEN AND CHIMNEY SWEEPS IN CHALK DRAWINGS¹

Don Kiser, AC2EV

Back in July RARA held their annual summer picnic and I decided to take a couple of my kids. None of them are licensed, yet and they didn't have any inclination to talk on the radios that were set up. Later in the afternoon Jon Dickason (N2JAC) came up to me and said, "hey we're going to do a fox hunt, do you think your kids would like to try?" So I asked them and they said, "sure." Ok, first they said, "a what?" and I explained it to them. But the fact that something in Amateur Radio interested them was the key. So, we went on a fox hunt and they found the fox and they liked it. Then, the twins decided that they wanted to do it again. Then a bit of a competition started between them. All in all, I believe we hid the fox 4 or so times. At the



On the Hunt at the RaRa picnic

Silent Key

William K. Hickok
K2EEN
July 21, 2018

Silent Key

Jim Cronin
N2VX
August 10, 2018

Silent Key

William C. March
WA2CER
August 1, 2018

end of the day the kids said, "that was fun, can we do it again?" Always looking for the next project I obliged.

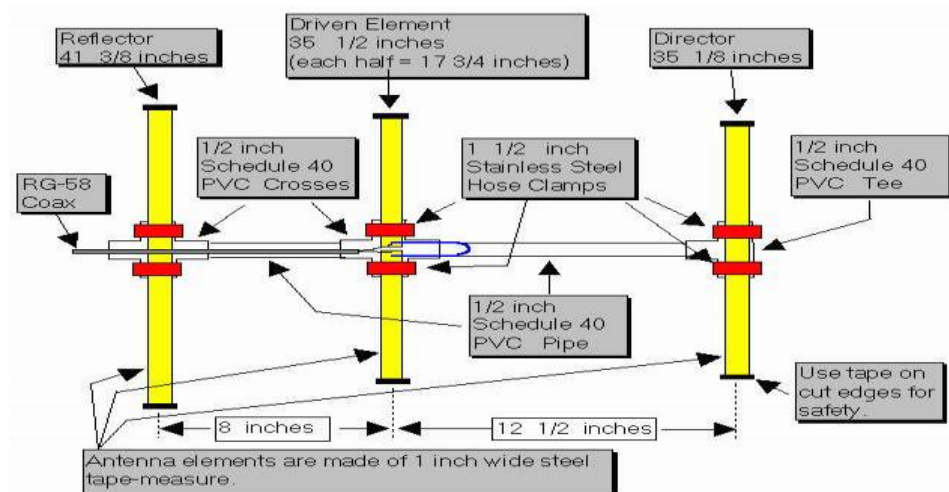
Later in the week it was off to the internet to find out what antennas work best and how to build them. I found many variations of the "tape measure" antenna and settled on the venerable Tape Measure beam designed by Joe Leggio - WB2HOL joe@theleggios.net.



The fox was hiding in the tree

It's built out of a few simple pieces of PVC and a cheap tape measure you can buy from Harbor Freight. It was a very simple build for the kids to do, with my assistance and we found the results to be very satisfying. After speaking with WB2HOL he informed me "... the antenna has also been included in at least one other of the ARRL publications I am aware of. Many hundreds (probably thousands) have been constructed, all around the world, by groups like yours, and individuals using it for purposes I never envisioned when I designed it. (from Moon Bounce EME, OSCAR communications, to hunting mushrooms in the woods²)."

It's now mid-August and my kids along with the neighbor's kids just spent the



Credit: Joe Leggio - image used with permission

weekend fox hunting in the Greece and Parma parks. The kids had a blast, they each took turns both hiding and hunting the fox. We had two foxes and two radios/antennas.

I decided to cash-in my RARA points and buy a radio for the fox hunt. I ended up buying the new Yaesu FT-4XR. It's direct conversion dual band transceiver. It's

only \$99.95 and rugged enough to survive the kids dropping it and cheap enough for me not to cringe when they do. You can get the single band for slightly less. While it's been called a Baofeng clone it's design is significantly different even though the radios share the same chip. It won't ever beat the FT-60R but it worked very well for the hunt. The biggest attraction, at least for Fox Hunting, is that the RF meter actually works as opposed to the Baofeng's. The second radio we used was a Yaesu VX-3R which is a very small and capable unit.



Fox 1—Byonics MicroFox 15
15mW programmable transmitter, \$75
<http://www.byonics.com>

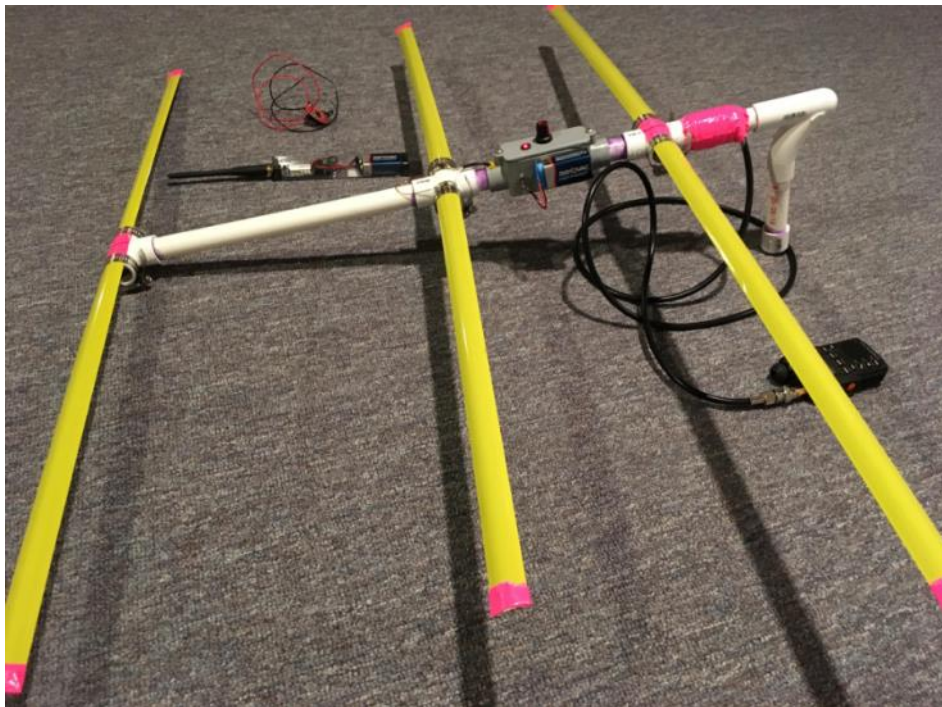


Fox 2—RigExpert Red Fox
144, \$30.99
<http://dxengineering.com>



Following I will show my construction techniques and some things we discovered in building the antennas as well as some improvements the kids suggested after using the antennas for several hours.

All 3 beams we built follow WB2HOL's design. We added the grey junction box to hold the offset attenuator designed by KC9ON (<https://kc9on.com/product/fox-hunt-offset-attenuator/>). This will help you greatly in finding the fox, especially once you get closer. This particular offset attenuator has a crystal oscillator at 4MHz. When you are far away from the fox you tune your radio to the Fox's frequency. As you get closer and you're at S9 on your receiver you start using the offset attenuator. Simply set your receiver to + or - 4 Mhz of the Fox's frequency and then adjust the attenuator to see S1-2 again on you receiver. Now keep hunting. As the signal strength increases you continue to adjust the attenuator to reduce the signal strength. When you have adjusted the attenuator to maximum attenuation and the signal strength is still S9 on your radio you know your within 1-3 feet of the fox. Without the attenuator you would've hit S9 long before you could spot it visually. Now you're right on top of it. At that point you can use the beam's null (backside), body fading, or remove the antenna altogether, to find where the fox isn't.



Above is the beam version 1.0. The offset attenuator is between the reflector and driven elements. There is a choke made from 5-8 turns of RG-8x behind the reflector element. While this design is good for two person operation it does not work well for one person. The handle is too far back and it makes the antenna difficult to carry for children. The kids thought it might be easier to carry if we

attached a sling to assist in carrying the antenna. The kids ended up holding it by the offset attenuator to carry it.



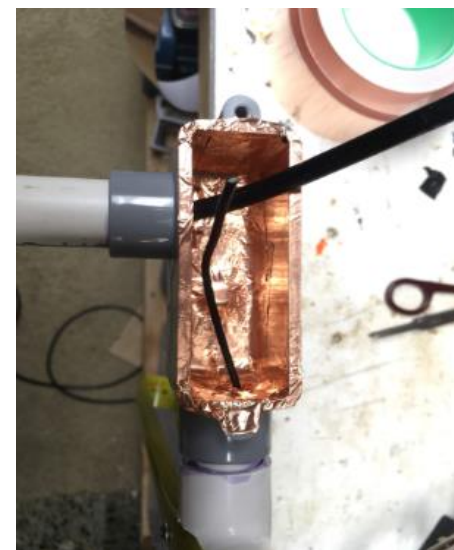
Parts for Tape Measure Beam v2.0



Screws hold down the reflector and director, saves money and looks better than clamps



Hairpin match and 5—8 turns of coax for the choke



Copper adhesive tape to shield the offset attenuator. Add some plastic to insulate the circuit board



Integrate the battery into the case. It's a tight fit.



With the side arrangement I can mount a radio to the top for easy viewing

Now go and build an antenna and gather the (grand) kids and go on a fox hunt. There's numerous parks and walking trails all around.

¹ If you're scratching your head about the chimney sweep in the title: I refer to this scene from Mary Poppins



² If you're wondering how someone uses a

tape-measure beam antenna to hunt for mushrooms it's really quite simple. No mushrooms are not radio active. The gentlemen left the transmitter at his car while he went out and hunted for mushrooms in the woods then found his way back to the car using the antenna and a receiver.

Websites:

http://theleggios.net/wb2hol/projects/rdf/tape_bm.htm - WB2HOL build instructions

<http://www.byonics.com> - Byonics MicroFox \$75

<http://dxengineering.com> - RigExpert Red Fox 144 for sale \$30.95

<https://rigexpert.com/products/ardf-receivers/> - RigExpert ARDF Equipment

<https://kc9on.com/product/fox-hunt-offset-attenuator/> - Offset Attenuator \$12 shipped

JAMBOREE ON THE AIR

Stephen Fell, K2SRF

There will be about 2000 Scouts and Scouters at Babcock Hovey located near Ovid NY along the Eastern shore of Seneca Lake. The event is the Challenge Camporee. The date is October 20, 2018 from 8:00AM till 4:00PM. We will be in a cabin located near the Dinning Hall taking part in the Jamboree on the Air event. JOTA is scouts all over the world making contacts on ham radio. Come down and demonstrate what you like best about the hobby. Any questions please contact Steve Fell at K2SRF@ROCHESTER.RR.COM

RIT's COLLEGE OF ART AND DESIGN

The 2018 Faculty Show from RIT's College of Art and Design (formerly the College of Imaging Arts and Sciences) has a couple of amateur radio-related items on exhibit. "Shortwave Daisies: High-Q Inductors for High Frequency Application," and "Certificate Design: ePFX300 Award," were contributed by RARA member John Viggiano, NV2K. The first piece features eleven spiral inductors wound on forms laser cut from scrap acrylic sheet. The second is an award certificate that John not only earned, but also designed.

The 2018 Faculty Show runs through Saturday, 29 September. For more information, visit <http://artdesign.rit.edu/bevier-gallery> and <https://artdesign.rit.edu/spas-gallery/>.



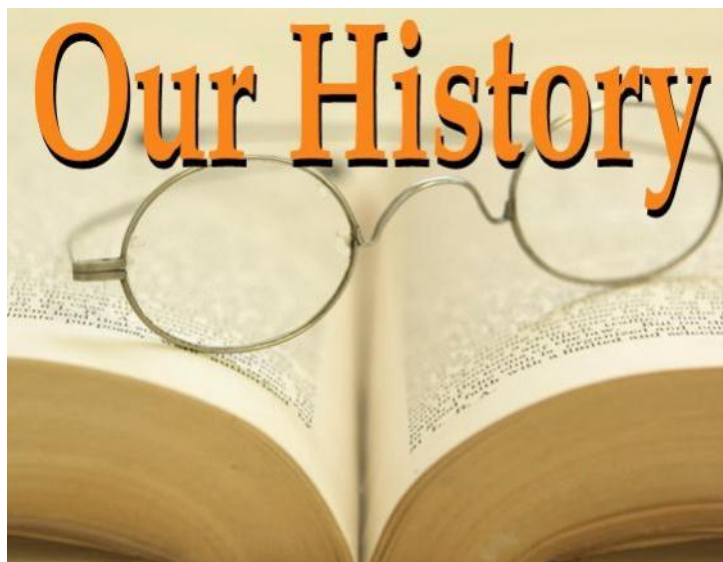
RAGS OF THE PAST

ED GABLE, K2MP, RARA HISTORIAN



40 Years Ago, October 1978

A very interesting program was arranged by VP Alan Komenski AC2K. This meeting featured Rochester Police officer Lt. Roy Irving, along with folks from Harris/RF, speaking on the new experimental PASS system being introduced in parts of Rochester and NY State. PASS, for "Personal Alarm Security System," was a small communications device that citizens would carry and directly call for assistance from law enforcement when needed. (This way before cellular technology – Ed) Dwight Hill K2KWK, an often published local news provider, penned a very informative piece on the history and now closing of the FCC Monitoring Station in Canandaigua, NY. Bob Roberts WA2QAU, continued his monthly reporting on DX activities, this month featuring VE8CRS, for Canadian Radio Signals, operating from Alert, Northwest Territories. Bob continued his column with a detailed report on DX QSL'ing tips. Rich Place, WB2JLR, writing for the RVHFG, announced their next meeting would be held at the new Harris/RF Engineering Building on University Avenue, with James Walker demonstrating Amateur Television. Everybody's friend, Tim Magee WB2KAO, writing for the RRRA, reminded readers of the local Sunday night information nets at 9:00 p.m. alternating between the local 28/88 and 19/79 repeaters. With regret it was announced that Larry Triggs W2YBK, was a Silent Key. Larry was a very popular local Amateur, very active on VHF, a previous Editor of the RaRa Rag and was the Associate Editor of the Antique Wireless Association Old Timer's Bulletin. From the Want Ads you could buy a Hallicrafters SR-46A from Florence Kirkbright WB2QXB (sk). A new commercial advertiser was ATR Communications, Wally Kincaid W2PG proprietor, featuring Wilson, Regency and Larson two-way radio equipment.



20 Years Ago, October 1998

This issue told of the coming program with the title "Do You Want to Work Easy DX, How About Contesting." Three members of the Rochester DX Association; Fred Gern K2FR, Chris Shalvoy K2CS and Rick Mintz W1TY, told the secrets all DX'ers knew. A rare note from the Rag Editors explained why this issue was a little late and smaller than usual. It seems a flood at the business/layout offices caused a delay as computers and papers took time to dry out. Keith Freeberg N2BEL (sk), wrote urging members to join the American Diabetes Association and their "America's Walk for Diabetes" fund raiser. The almost seven mile loop along Park Avenue included five rest stops and required nine Amateur Radio volunteers to serve the expected 500 participants. RARA President Rick Well W2RW, in his "The Prez Sez..." article urged everyone to read, understand and comment on the ARRL and FCC restructuring proposals. This issue revealed an interesting article, part 1 of 2 parts, on a personal DX experience by David Selbert KA2BOK. David tells of a QSO with SP9EML that turned into a life-long friendship and visits to each other's QTH. Lloyd Caves N2PU, filled a full page with an interesting insight on those commercial enterprises which are vying for our coveted radio frequencies. Low Earth Orbiting Satellites (LOES) come to mind along with some VHF/UHF bands. (Good-bye 220 MHz) Lloyd stressed that we need to use our frequencies in a manner that helps the public, such as the many RaRa Public Service events, to keep the need for Amateur Radio in the eyes of organizations we serve. Licensing Class Director Tim Magee WB2KAO, wrote to report on the new class enrollment just starting. With regret it was reported that Mel Stoller K2AOQ, was reported as a Silent Key. There were no Want Ads in this issue as perhaps they fell victim to the flood. A new commercial advertiser was Livingston Travel of Avon, NY.

VE TEAM

The next **ALWAYS FREE** testing session:
Saturday October 20th (third Saturday)
Rochester Institute of Technology
Kate Gleason College of Engineering
Gleason School of Engineering
Room 3139, Bldg. 9
Use "J" parking lot

Registration at 9:45AM
Testing at 10:00AM

You do not have to preregister.

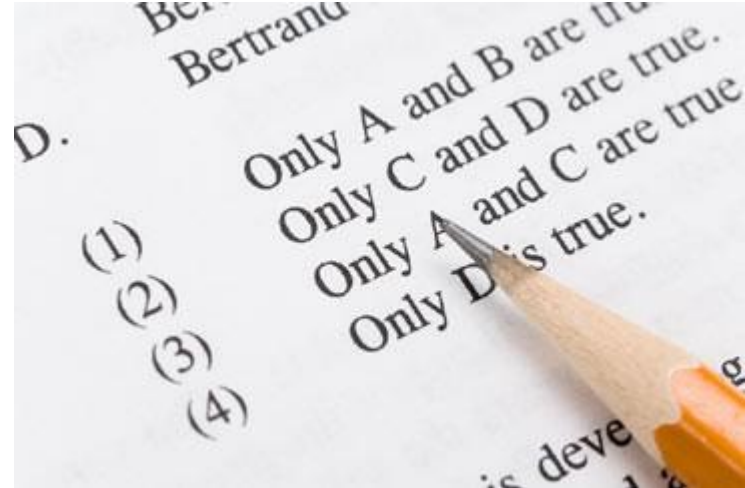
To avoid giving your SSN go to:

<http://wireless.fcc.gov/uls/index.htm?job=home>
Register and bring the resultant FRN.

For more info:

<https://www.laurelvec.com/?team=RARA>

Don Kiser - AC2EV
RARA Board member
VE Team Leader
585-613-1035



Paul Adamides	KD2PII	E	Larissa Plaskon	KD2QKX	T
Richard Joerger	KC3MAQ	T	Vivek Joshi	KD2QKY	T
Corey Rapp	KD2QKV	G	Matthew Bacchetta	N2YCK	G
Andrew Eberhard	KD2QKW	T			

New licensees names are in BOLD

RaRa CALENDAR

Tim Barrett, K9VB

October 2018						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2 Phone Fray UKEICC 80m Contest	3 RaRa Monthly Mtg 7:00pm, BSA HQ, Brighton Henrietta TLR ROC City Net 8:00pm 3.826 MHz 432 MHz Fall Sprint SARL 80m QSO Party	4 RaRa BoD Meeting 5:45pm Nova- works 333 Metro Park Rochester 14623 ARES Net 146.61 MHz 7pm NRAU 10m Activity Contest SKCC Sprint Europe NCCC Sprint	5 YLRL Anniversary Contest	6 AWA Museum Open 1pm - 5pm YLRL Anniversary Contest Microwave Fall Sprint Russian WW Digital Contest CA QSO Party FISTS Slow Speed Sprint RSGB DX Contest
7 Microwave Fall Sprint Russian WW Digital Contest International Hell Contest CA QSO Party Peanut Power QRP Sprint RSGB DX Contest	8 RSGB CW Autumn Series	9 Phone Fray	10 ROC City Net 8:00pm 3.826 MHz 10-10 10m Sprint	11 ARES Net 146.61 MHz 7pm NCCC Sprint	12	13 AWA Museum Open 1pm - 5pm Makrothen RTTY Contest NV AZ PA SD QSO Parties Oceania DX Contest, CW QRP ARCI Fall QSO Party SKCC Sprintathon
14 Makrothen RTTY Contest NV AZ PA SD QSO Parties Oceania DX Contest, CW QRP ARCI Fall QSO Party Scandinavian Activity Contest, SSB SKCC Sprintathon	15 ARRL School Club Roundup Telephone Pioneers QSO Party	16 ARRL School Club Roundup Telephone Pioneers QSO Party SIARC 7.30pm RDXA 7:30pm Phone Fray	17 ARRL School Club Roundup ROC City Net 8:00pm 3.826 MHz RSGB 80m Autumn Series, Data	18 ARRL School Club Roundup ARES Net 146.61 MHz 7pm NCCC Sprint	19 JOTA Weekend	20 RaRa Academy – Getting on HF AWA Museum Open 1pm - 5pm NY QSO Party JOTA Weekend JARTS WW RTTY Contest 10-10 Fall Contest CW Worked all Germany Contest Stew Perry Topband Challenge Feld Hell Sprint
21 JOTA Weekend JARTS WW RTTY Contest 10-10 Fall Contest CW Worked all Germany Contest IL QSO Party Stew Perry Topband Challenge Run for the Bacon QRP Challenge	22	23 Phone Fray SKCC Sprint	24 ROC City Net 8:00pm 3.826 MHz	25 Monroe Cty ARES 6pm, Red Cross Center, Prince St RSGB 80m Autumn Series, SSB NCC Sprint	26	27 AWA Museum Open 1pm - 5pm CQ WW DX Contest SSB ARRL EME Contest
28 CQ WW DX Contest SSB ARRL EME Contest	29	30 Phone Fray	31 ROC City Net 8:00pm 3.826 MHz			

NEWS FROM AREA CLUBS

MONROE COUNTY ARES / RACES News

The Monroe County Amateur Radio Emergency Service, Inc. holds its meetings on the fourth Thursday of each month. Anyone interested, members and non-members, are welcome to attend.

The next ARES Meeting will be held on: **Thursday, October 25, 2018, at 6:00 PM.**

Meetings are held at the **Greater Rochester Chapter of the American Red Cross HQ, 50 Prince Street, Rochester, NY 14607.** (Located behind the Rochester Auditorium Theatre, 885 Main St. E.)

ARES NET: Monroe County ARES/RACES meets on the air every Thursday of the month at 7:00 pm, on the 146.61 MHz (-) 110.9 Hz PL repeater. The only exception to that are nights when we hold our regular meeting, generally on the 4th Thursday of the month.

WEB: www.monroecountymcomm.org

Severe Weather Alerts:

Winter brings severe weather in the form of heavy snow and strong winds. If you experience severe weather, especially when accompanied by damage to property in your area, listen to your local ARES/RACES repeaters for information. While official ARES/RACES activation could be a possibility, it is more important that we open a spontaneous net simply to share information about weather conditions in your immediate area. Don't wait for someone else to do it. Pick up the microphone and start a net. Have each check-in station give you a situational awareness report and emergency power report. If you don't have a copy of the directed net protocol, you can find one at the WEB address listed above. (Activities/ARES Net/ Net Script/ Downloads)

NBEMS: Want to learn about Narrow Band Emergency Messaging System (NBEMS)? It's the latest and easiest way to "Go Digital!" Bring your laptop computer and 2-M handheld transceiver. We will conduct an NBEMS clinic after every meeting through June 2019.



ROCHESTER DX ASSOCIATION, RDXA

RDXA meets the 3rd Tuesday of every month (September through May) except for December, which is the Annual Holiday Banquet. Meetings are open to everyone and all are encouraged to attend. The next meeting is Tuesday October 16, 2018



Meetings are held at the Monroe County EOC 1190 Scottsville Rd. (second floor), Rochester, NY 14624 at 7:30PM.

ROCHESTER RADIO REPEATER ASSOCIATION

RRRA's next meeting will be held on October 19, 2018. Membership meetings are held on the 3rd Friday of the month in the Pittsford Town Hall Basement starting at 7:30 PM. Hope to see you there.

The program we are trying to get is a speaker talking about a local industry that is a major concern to all of us. We have made the request but haven't gotten a definite yes as of this writing. We will update the www.k2rra.org web site with details of our October RRRA meeting. Don't forget, November will be RRRA's annual tune up clinic.

RRRA can't exist without members. If you are not currently a member and want to support RRRA, you can join at a monthly meeting or on our web site www.k2rra.org RRRA also accepts donations to the club.

RRRA officers for 2018 - 2019 are , Bob O'Dell, N2BZX President, Bob Shewell, N2HJD Vice President, ED Wilkonski, KC2WM Secretary, and Bob Smith, NS2B-Treasurer / Membership Chairman.

ROCHESTER VHF GROUP

The Rochester VHF Group sponsors an informal On-Air Net every Monday at 2100 local time on 144.260 MHz USB and a 6 Meter Net every Thursday at 2100 local on 50.200 MHz USB.

More club information can be found by visiting www.rvhfg.org or just calling in any Monday or Thursday night. All are welcome to check in to these nets.

XRX AMATEUR RADIO CLUB

The XRX Amateur Radio Club will be having their next meeting on Thursday October 11th, 6 PM, at the Webster Recreation Center. This will be a combined meeting with the Rochester VHF Group. The VHF Group will put on a presentation about transverters. XARC will also be putting on our Fall Foxhunt in October. Look for details on our website <http://xarc.us>

SQUAW ISLAND AMATEUR RADIO CLUB, SIARC

The Squaw Island Amateur Radio Club (SIARC) meets every second Wednesday of the month at 7:30PM at the Ontario County Safety Training Facility, 2914 County Road 48, Town of Hopewell. We have License Exam Testing every other month which begins at 6:30PM. The next meeting will Wednesday, October 10th. There will not be license Exams this month. 73's Steve Benton VP SIARC WB2VMR

AMATEUR RADIO ASSOCIATION OF THE SOUTHERN TIER, ARAST

ARAST meets the third Thursday of every month at the Town and Country Fire Department on Gardner Rd in Horseheads New York. Chemung County ARES (CCARES) meets the first Tuesday of the month except February at Harris Hill. See www.ccares.info for details. CCARES covers the entire area in Chemung, Schuyler and Steuben counties and all are welcome.

June was field days at Cabin 5 on Harris Hill next to the National Soaring Museum. Steven KC3DOW should have some photos available on the website. Thanks to all who made the day a great one.

Strong kids ,Safe Kids was a good event for communicators as we helped keep the people in charge up to date with direct communication with each gate. All problems were directly handled as a result of that direct communication.

This month we will be reviewing the Wineglass Marathon(CCARES) . Anyone with concerns or problems encountered , will have a chance to discuss these concerns. We want to know what concerns were encountered to make next years event go smoother.

Communicators are needed to help out with the 2019 Wineglass Marathon(date to be announced) . If you would like to help out, contact the emergency coordinator: emergencycoordinator@stny.rr.com .

2019 Hamfest will be the last Saturday of September 2019. Stay tuned for details

Our website is still under construction. It is anticipated that construction will continue until after the Hamfest. Until that is finished check us out at www.arast.info .

Don't forget to check out our repeaters when you visit the area. The N3AQ 147.36(+) and the 146.70(-) are the principal 2 meter repeaters. Also Echolink is available using the call sign KA2BED-R. Check it out. A full list of available repeaters that can be heard in the twin tiers area surrounding Chemung County can be found at www.arst.info/arast_website/public/repeaters.php

COMMUNITY AMATEUR RADIO CLUB, CARC

If you are interested in being a part of this forward thinking and active club, visit us at a meeting or join us on one of our weekly nets. We meet at the Hoag Library (134 S. Main St. Albion, NY) on the first Saturday of each month at 7PM. Each meeting has a brief training/refresher period with upcoming topics including: net protocol, repeater set-up/maintenance, and digital signaling. The club holds a net every Sunday evening at 8pm (winter) and 9PM (summer) - 0100 UTC Monday - on 147.585 simplex, and we host the Thursday Night Social Net, Thursday at 8:30PM on 147.285+. We'd love to hear you check-in! Take a look at the club website for more info: www.k2srv.org

DIGITAL COMMUNICATIONS ASSOCIATION OF PERINTON, DCAP

DCAP members continue to experiment with leading edge digital communications modes. We were formed in 1994 to foster the development of local and regional packet radio networks using AX25 and TCP/IP. Today we have members using the club sponsored DSTAR repeater (KB2VZS on 444.8MHz), several personal and public [DSTAR hotspots](#) (using the dvprtr board), Yaesu fusion systems on non-club repeaters and DMR. The last mode is being enjoyed locally through a [DV-Mega-Raspberry PI](#) combination. DCAP meets for breakfast at 7AM nearly every Saturday morning at [Rikki's Family Restaurant](#) in Fairport and everyone is welcome to join us. Talk in is on the KB2VZS analog repeater on 146.715 MHz with a PL of 110.9 Hz.

WESTSIDE AMATEUR RADIO CLUB

The mission of the Westside Amateur Radio Club is to provide emergency communications services to the community, to assist other civic organizations, to promote the technical craft of amateur radio through class training and testing, to mentor new members, and enhance fellowship among radio amateurs.

The Westside Amateur Radio Club meets on the first Tuesday of the month, 7PM, at the Chili Public Library. The Library is located at 3333 Chili Ave, Rochester, NY 14624.

The talk in repeater for all meetings is the WR2AHL Repeater 146.760MHz - 110.9. AllStar, Echolink, and web streaming connections are available. Website: <http://WestsideAmateurRadio.club>

INTERLOCK ROCHESTER - K2HAX - ROCHESTER'S HACKERSPACE

Interlock Rochester is open most every Tuesday night at 7pm. We're in the Hungerford Building (1115 East Main Street, Rochester NY), just north of Village Gate. Come to Door #7 (to the left of Comics Etc) and buzz Suite 200. Want to know more? Visit our website at <http://www.interlockroc.org/>, contact us at info@interlockroc.org, or find us in #interlock on Freenode IRC.

GENESEE VALLEY AMATEUR RADIO ASSOCIATION

2018 Meeting and Testing Schedule

Testing Schedule:

Saturday, October 20, 2018 1:00 PM - 2:00 PM

Meetings to follow after testing.

Location -

Brick Presbyterian Church

6 Church St.

Perry, NY 14530

Email n3dsp@lafireline.net for details.

ROCHESTER MAKERSPACE

The Rochester Makerspace is located at the rear of 850 St. Paul Street in almost 4,000 square feet of workspace. We are a volunteer-run 501c(3) nonprofit organization and our mission is to encourage learning, creativity and collaboration. We do that by providing low-cost and free access to sophisticated tools, offering a wide variety of classes, and by providing opportunities for "makers," artists and crafts persons of all kinds to meet and learn from each other.

Drop in to explore, learn and make at our weekly open house:

Every Thursday Night, 6 to 10 PM – Weekly Community Night & Open House

Every Saturday, 11 AM to 3 PM – Weekly Community & Open House

Park in the lot at Scrantom St. and Conkey Ave. and follow the signs.

A ham bench is set up with a 2 meter FM radio and a laptop with WebSDR. Waiting for nicer weather to install outside antennas for the Heathkit HW101 transceiver and Kenwood all mode 2 meter transceiver. Donations of ham equipment accepted.

For more information visit <https://www.makerspacerochester.org/hamradio>

ASTRONOMY SECTION ROCHESTER ACADEMY OF SCIENCE

For more information visit <http://www.rochesterastronomy.org/>

PARTS WANTED

National Radio Products Coil Form XR-50 need 3

Pi-wound choke, .5 mH need 1

Pi-wound choke, 2.5 mH need 1

Plate choke, 145 µH (National type R-175A) need 1

0.5 ohm, wirewound, 25 watt, chassis mount resistor need 1

1000 pf at 5 kV minimum doorknob capacitor. need 2

Here is a link to the project:

<http://www.kg7tr.com/813-linear-amplifier.html>

Please contact:

Thomas Pretto

(585) 739-0911

N2AMA

THE AMATEUR'S CODE

Originally written by Paul M. Segal, W9EEA (1928)

THE RADIO AMATEUR IS:

CONSIDERATE	Never knowingly operating in such a way as to lessen the pleasure of others.
LOYAL	Offering loyalty, encouragement and support to other amateurs, local club, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.
PROGRESSIVE	With knowledge abreast of science, a well built and efficient station and operation beyond reproach.
FRIENDLY	With slow and patient operation when requested, friendly advice and counsel to the beginner, kindly assistance, co-operation and consideration for the interests of others. These are the hallmarks of the amateur spirit.
BALANCED	Radio is an avocation, never interfering with duties owed to family, job, school or community.
PATRIOTIC	With station and skill always ready for service to country and community.

RARA MARKETPLACE

Your commercial ad could be here! The RARA RAG can help spread the word on your business at very reasonable rates.
Contact us for details at editor@rochesterham.org.

Michele A. Jamison, MD
Office Hours
by Appointment

Jamison Eye Care

www.JamisonEye.com

90 Erie Canal Drive | Rochester, NY 14626 | P: (585) 225-5883

ELECTRICAL WORK • TELEPHONE JACKS • CABLE TV
BURGLAR ALARM SYSTEMS • PADDLE FANS

MARTIN IPPOLITO
Master Electrician

Call 585-266-6337

P.O. Box 17438
Rochester, NY 14617
N2HEG

PROMOTE YOUR BUSINESS WITH RAG ADVERTISING

Ad size and cost—**per year**:

Business Card	\$140
Quarter Page	\$300
Half Page	\$600

Your advertisement will be seen by amateurs in Rochester, Monroe County, New York State, the United States and even the rest of the world. RAG circulation is approx. 4,500.

Pass it forward
by donating your radio
or accessory to RARA.



Your item may be sold at future RARA events with proceeds to benefit RARA members.

You will get a tax-deductible receipt and the satisfaction that comes with doing good for others.

Call 585-210-8910 or email
Secretary@RochesterHam.org.

RARA is an IRS 501.c.3 non-profit

Consult with your tax advisor.

RARA OFFICERS, DIRECTORS AND COORDINATORS

OFFICERS

President: Tim Guyot, KB1POP	(585) 406-3163	timguyot@gmail.com	Treasurer: Brian O'Connor, KA2CGB	(585) 721-2346	ka2cgb@arrl.net
Vice-President: Scott Theis, W2LW	(845) 774-9809	sa_theis@hotmail.com	Secretary: Ralph Dutcher, KD2BDZ	(585) 738-9949	dutchr@gmail.com

DIRECTORS

Tim Barrett, K9VB	(585) 582-2108	tim.k9vb@gmail.com	Don Kiser, AC2EV	(585) 613-1035	dkiser100@gmail.com
Tim Brown, WB2PAY	(585) 750-2087	tjbrown@rochester.rr.com	Karl Heinz Kremer, K5KHK	(585) 503-7214	k5khk@khk.net
James Burroughs, KN4LSL		jebsar1@yahoo.com	Mike Moore, KC2NM	(585) 721-0011	mikemoore@ieee.org

ACTIVITY COORDINATORS

Club Historian	Ed Gable, K2MP	egable@rochester.rr.com	Public Service	Mike Moore, KC2NM	mikemoore@ieee.org
Club Station Trustee	Jim DiTucci, N2IXD	n2ixd@arrl.net	Raffle Administrator	Forest Shick, WA2MZG	wa2mzg@arrl.net
Education	Tim Brown, WB2PAY	tjbrown@rochester.rr.com	RARA Academy	Tim Brown, WB2PAY Scott Theis, W2LW	tjbrown@rochester.rr.com webmaster@rochesterham.org
Hamfest Co-Producers	Tim Guyot, KB1POP Mike Kolstee, KD2IZQ Mike Moore, KC2NM	timguyot@gmail.com mckolst@yahoo.com mikemoore@ieee.org	RARA RAG Editor	Forest Shick, WA2MZG	editor@rochesterham.org
VE Team	Don Kiser, AC2EV	dkiser100@gmail.com	Refreshments	Kelly Nichols, KD0FOP Robert Mac Donald, KD2OHI	
Media Communications	Tim Guyot, KB1POP	timguyot@gmail.com	Reward Points Administrator	Tim Barrett, K9VB	tim.k9vb@gmail.com
Meeting Audio	Brad Allen, KB2CHY	ballen@frontiernet.net	Venture Crew	Stephen Fell, K2SRF Mark Pedersen, KC2UES	k2srf@rochester.rr.com mpeder21@gmail.com
Membership Secretary	Tim Barrett, K9VB	tim.k9vb@gmail.com	Webmaster	Scott Theis, W2LW	webmaster@rochesterham.org

NOVEMBER RAG DEADLINE

OCTOBER 15, 2018



**RARA meets at 7PM on the
first **Wednesday** of each month. Join
us at:**

Seneca Waterways Council, BSA Headquarters
2320 Brighton Henrietta Town Line Rd
Rochester, New York 14623

Get Directions

Rochester Area Repeater Listing

THE RARA RAG

Published by
Rochester Amateur Radio Association, Inc.
P.O. Box 93333, Rochester, NY, 14692-8333
Hotline – (585) 210- 8910
Website – <http://www.rochesterham.org>

ROCHESTER AREA RADIO CLUB CONTACTS

Antique Wireless Association (AWA)

Lynn Bisha, W2BSN: lbisha@rochester.rr.com

Amateur Radio Association of the Southern Tier (ARAST)

Reiner Dieg, N2PEZ: rdieg@yahoo.com

Astronomy Section Rochester Academy of Science

Mark Minarich: mminaric@rochester.rr.com

Community Amateur Radio Club (CARC)

Joe Gangi, AC2NB: ac2nb.carc@gmail.com

Digital Communications Association of Perinton (DCAP)

Gary Skuse, KA1NJL: ka1njl@arri.net

Drumlins Amateur Radio Club Ltd. (DARC)

Alan Cook, K2MPE: alancook948@gmail.com

Fisherman's Net Amateur Radio Club

Jim Sutton, N2OPS: jim@otrym.org

Genesee Valley Amateur Radio Assn.

Bill Boyd, N3DSP: N3DSP@lafireline.net

Keuka Lake Amateur Radio Association (KLARA)

Gary Stratton, KC2YTD: keukelakeara@gmail.com

Monroe County ARES

Jim DiTucci, N2IXD: n2ixd@arri.net

Orleans County Amateur Radio Club (OCARC)

Terry Cook, K2EYS: k2eys@ocarc.us

Rochester Amateur Radio Association (RARA)

Tim Guyot, KB1POP: tinguyot@gmail.com

ROC City Net

Jim Merolillo, K2ZX: k2zx52@gmail.com

Rochester DX Association (RDXA)

Chris Shalvoy, K2CS: cshalvoy@att.net

Rochester Makerspace

David Duckles: rocmakers@gmail.com

Rochester Radio Repeater Association (RRRA)

Bob Shewell, N2HJD: bshewell@frontiernet.net

Rochester VHF Group (RVHFG)

John Stevens, WB2BYP: wb2byp@arri.net

Squaw Island Amateur Radio Club (SIARC)

Steve Benton, WB2VMR: sbenton2@rochester.rr.com

Westside Amateur Radio Club

Justin Grigg, KC2EQU: communications@westsideamateurradio.club

XXR Amateur Radio Club

Brian Donovan, K2AS: k2as@outlook.com